

Title (en)

A RARE EARTH FLEXTENSIONAL TRANSDUCER.

Title (de)

FLEXTENSIONELLER UMWANDLER AUS SELTENEN ERDEN.

Title (fr)

TRANSDUCTEUR FLEXTENSIONNEL EN TERRES RARES.

Publication

EP 0207095 A4 19890313 (EN)

Application

EP 85906018 A 19851125

Priority

US 68369784 A 19841219

Abstract (en)

[origin: WO8603888A1] A flextensional transducer driven by magnetically biased rare earth rods (31). The rods (31) are arranged in stacks with rare earth magnets (34) mounted on each end of each stack for providing the bias field. The rods (31) are slotted to reduce eddy currents and surrounded by a slotted drive coil (32) with a slot (32a) in the coil bobbin. The ends of the flextensional shell associated with the shell major axis have a full radius curvature which stiffens the shell ends so that the axial bias and drive forces will not break the rare earth magnets (34) in flexure.

IPC 1-7

H01L 41/06; H04R 15/00

IPC 8 full level

G10K 9/12 (2006.01); **H01L 41/12** (2006.01)

CPC (source: EP US)

G10K 9/121 (2013.01 - EP US); **H10N 35/00** (2023.02 - EP US)

Citation (search report)

- [A] JOURNAL OF THE ACOUSTICAL SOCIETY OF AMERICA, vol. 62, no. 5, November 1977, pages 1158-1164, The Acoustical Society of America; S.W. MEEKS et al.: "Rare earth iron magnetostrictive underwater sound transducer"
- [A] US NAVY JOURNAL OF UNDERWATER ACOUSTICS, vol. 27, no. 1, January 1977, pages 175-179; R.R. SMITH et al.: "Design of a transducer using rare-earth magnetostrictive materials"
- See references of WO 8603888A1

Designated contracting state (EPC)

DE FR GB SE

DOCDB simple family (publication)

WO 8603888 A1 19860703; AU 5197586 A 19860722; AU 578129 B2 19881013; EP 0207095 A1 19870107; EP 0207095 A4 19890313; JP S62501182 A 19870507; US 4901293 A 19900213

DOCDB simple family (application)

US 8502300 W 19851125; AU 5197586 A 19851125; EP 85906018 A 19851125; JP 50527785 A 19851125; US 6518387 A 19870624